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10/554,481

10/24/2005

Diane M. Artman

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08/04/2009

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EXAMINER

OLADAPO, TAIWO

ART UNIT

PAPER NUMBER

1797

MAIL DATE

DELIVERY MODE

08/04/2009

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

|                              |                                      |                                      |  |
|------------------------------|--------------------------------------|--------------------------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b><br>10/554,481 | <b>Applicant(s)</b><br>ARTMAN ET AL. |  |
|                              | <b>Examiner</b><br>TAIWO OLADAPO     | <b>Art Unit</b><br>1797              |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 28 April 2009.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-15, 18 and 20-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-15, 18 and 20-22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

1. The amendment dated 04/28/2009 has been considered and entered for the record. The response is persuasive therefore previous rejections are withdrawn. A new ground of rejection is set forth for all claims.

#### ***Claim Rejections - 35 USC § 102/103***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

3. Claims 1 – 5, 7, 8, 10 – 15, 18, 21, 22 are rejected under 35 U.S.C. 102(a) as being anticipated by or, in the alternative, under 35 U.S.C. 103(a) as being obvious over Carrick et al. (WO 03/022963).

4. In regards to claim 1 – 5, 7, 15, 18, Carrick teaches a lubricating oil composition (page 6 lines 20 – 30) and a process for lubricating heavy duty diesel internal combustion engine (page 6 lines 12 – 14) by supplying a lubricant comprising a less than 0.25 wt. % of sulfur (page 4 lines 17 – 30), less than 0.1% or less than 0.01% phosphorus (page 5 lines 10 – 24), and from 0.3 to 1.2% ash (page 5 lines 25 – 30). The upper endpoint of 1.2% ash meets the claimed limitation. The antiwear includes sulfurized olefins (page 43, Table) and the dispersant is a nitrogen based succinimide dispersant that can comprise 7.2% of the lubricant (page 42, Table). The concentrations in Examples 1 – 3 of the table disclose the invention of Carrick (page 39 line 30).

Art Unit: 1797

Particularly in regards to claims 2, 3, 5, Carrick teaches the lubricant which may comprise overbased saligenin detergent (page 14 line27).

5. In regards to claim 8, Carrick teaches the lubricant that can comprise zinc dialkyldithiophosphate (ZDDP) in the amount of 0.5% (page 43 table).

6. In regards to claims 10, 11, Carrick teaches the lubricant which may comprise 1 or 4% hindered phenolic antioxidants (page 43, Table).

7. In regards to claim 12, Carrick teaches the lubricant wherein the sulfurized olefin can be present at 0.6% (page 43, Table)

8. In regards to claim 13, Carrick teaches the lubricant wherein the overbased saligenin detergent can be present at i.e. 1.5% (page 43, Table)

9. In regards to claim 14, Carrick teaches the lubricant wherein phosphorus can be present up to 0.01% (page 5 line 19).

10. In regards to claims 21, 22, Carrick teaches the process wherein sulfurized olefin is present at 0.6%, dispersant is present at 7.2%, and the overbased saligenin detergent is present at 1.5% as previously stated.

### ***Claim Rejections - 35 USC § 103***

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 1797

12. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

13. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

14. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Carrick et al. (WO 03/022963) in view of Davis (US 4,582,618)

15. In regards to claim 6, Carrick teaches the lubricant composition comprising sulfurized olefins but does not recite a specific type. Davis teaches a low phosphorus, low sulfur lubricant suitable for lubricating diesel engines similar to Carrick (Title, column 14 lines 46 – 51). Davis teaches that the lubricant comprises sulfurized C<sub>4</sub> – C<sub>20</sub> olefins (Davis, column 4 lines 41 – 59). It would have been obvious for one of ordinary skill in the art at the time of the invention to have used the sulfurized olefins of Davis in the lubricant of Carrick, as Davis teaches they are suitable for use in lubricants for diesel engines.

Art Unit: 1797

16. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Carrick et al. (WO 03/022963) in view Locke et al. (US 2001/0036906)

17. In regards to claim 9, Carrick teaches the lubricant composition comprising ZDDP but does not particularly recite that they contain more than 50% secondary alkyl groups. Locke teaches heavy duty diesel lubricants having low phosphorus similar to Carrick (abstract). Locke teaches that the lubricants contain metal dithiophosphates such as ZDDP [0061], which comprise more than 90 mole% secondary alkyls [0064]. Carrick teaches that the secondary groups give better wear control. It would have been obvious for one of ordinary skill in the art at the time of the invention to have used zddp having high percentage of secondary alkyl groups as taught by Locke in the invention of Carrick in order to make a lubricant having better wear control.

18. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Carrick et al. (WO 03/022963) in view of Igarashi et al. (US 5,912,212)

19. In regards to claim 20, Carrick teaches the lubricant composition which comprises antioxidants but does not recite the antioxidant of the claim. Igarashi teaches a lubricating oil composition containing 3-methyl-5-tert-butyl-4-hydroxyphenyl substituted fatty acid ester present in the amount of from 0.1 to 5% which is an antioxidant (column 1 lines 43 – 50; column 2 lines 3 – 23). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the ingredients of Igarashi to the invention of Carrick, as Igarashi teaches it is suitable as an antioxidant in lubricating oils.

### ***Response to Arguments***

20. Applicant's arguments have been fully considered and are persuasive.

Art Unit: 1797

21. The applicant primarily argues that the reference of Fetterman does not teach the nitrogen-free sulfurized olefin antiwear agent of the present invention and therefore does not meet the sulfated ash and phosphorus limitation of the claim. The applicant asserts that the antioxidant compounds according to Fetterman are not sulfurized olefin but sulfurized alkyl phenols. Contrary to the argument, Fetterman teaches that the antioxidants or component B of the invention are i.e. sulfurized olefins (column 32 lines 52 – 55). Fetterman's teaching of sulfurized alkyl phenols identifies another compound that can be used for component B, but do not limit the antioxidants to them alone as sulfurized olefins are also taught as being useful.

The applicant also argues that the amount of sulfated ash of from 0.8 to 1.2% present in the composition is not taught by Fetterman. The argument is persuasive therefore the previous rejections over Fetterman are withdrawn. New rejections are made over Carrick (WO 03/022963)

The applicant states that the declaration by Virginia Carrick was not considered by the examiner. However, the examiner previously responded to the declaration in the advisory action dated 02/18/2009. The applicant asserts that the declaration shows unexpected superior results to Fetterman and other references used. The results for F Ex 1, Ex D, Ref C, and Ref B are not commensurate in scope with independent claim 1 which recites the dispersants present in the composition from 1 to 10%. The inventive examples only reflect a single concentration of 7.57% for a single specific nitrogen-containing dispersant, while the claim can have 1 to 10% by weight of any nitrogen-containing dispersant. Further, the inventive compositions only have specific amounts of sulfurized olefin, while the claims can include any amount of sulfurized olefin sufficient to impart antiwear performance. In the absence of data, the applicant must

Art Unit: 1797

provide a good explanation why wear scar values will not change over the ranges recited in the claims.

Furthermore, the results are not commensurate in scope with the limitations of independent claim 5 which requires overbased detergents selected from salixarates, saligenins, salicylates, glyoxylates and their mixtures, not the overbased metal sulfonates used in the experiments. Nevertheless, since the new rejections over Carrick anticipate the claimed composition and process, arguments of unexpected results cannot overcome them. Therefore the arguments are moot.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to TAIWO OLADAPO whose telephone number is (571)270-3723. The examiner can normally be reached on 8:00 - 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on (571)272-1444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



Art Unit: 1797

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Ellen M McAvoy/

Primary Examiner, Art Unit 1797

TO